

Kew and Singapore

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*"The gift of a useful plant seems to me more precious than
the discovery of a gold-mine"*—BERNARDIN DE ST. PIERRE
(translated)*

IT IS A pleasing thing that the Botanic Gardens at Singapore and the Royal Botanic Gardens at Kew should be celebrating in the same year, the one honouring 100 years of existence on the present site, the other commemorating the 200th anniversary of its founding. As we congratulate each other on the happy occasion and wish each other well for the future, it is also fitting that we recall the close bonds which have been woven between Kew and Singapore during their common life. In order to understand how these bonds came to be fashioned, it may be helpful to retrace some part of the history of the gardens at Kew.

The Royal Garden of Princess Augusta

Two hundred years ago Kew House, situated near the River Thames 7 or 8 miles above Westminster, was the residence of Augusta, Princess of Wales and daughter-in-law of King George II. Here this German princess had been brought by her husband, the Prince of Wales, soon after their marriage, and here she continued to live after his early death. In 1759 she decided on making improvements to the place. She engaged a prominent architect, Sir William Chambers, to re-design the grounds, and employed a skilled gardener, William Aiton, to make a garden of exotic plants or botanic garden. Chambers laid out the grounds in the fashionable mode of the day, building a handsome Orangery, a Great Stove (the largest heated greenhouse then in existence), a Pagoda, and various Temples; and some of his buildings are features of the gardens still. Aiton was no less industrious, and, in seeking plants for the botanic garden, Princess Augusta was greatly helped by the third Earl of Bute, whose influence was exerted to secure plants from many distant lands. Soon the garden became famed throughout Europe for the unrivalled variety of its plants.

* From the inscription on a memorial erected in 1860 in the Botanic Gardens of Pamplemousses, Mauritius.

New Functions for the Royal Gardens

It may be noted that, at the start, no more was desired of the garden than that it should provide pleasure and interest to its royal owner and her friends. In 1772 when Princess Augusta died, the garden was taken over by her eldest son who, by this time, had succeeded to the throne as King George III, and he increased the area of the property by addition of adjoining lands. For guidance in the care of the garden the King sought the advice of Sir Joseph Banks, a man of outstanding ability and scientific knowledge, who was to exercise a directing influence on its activities over a period of many years. His view was that the royal garden should become a place where the plant-resources of the world would be studied and made known, and where men might be trained who would go abroad to seek and collect new plants. These proposals, being approved by the King, set the Gardens on a course which has been followed to the present day. There have been times when the policy wavered, and indeed a bad period followed the death of Banks and George III when the closure of the Botanic Gardens was under consideration. But this, causing an outcry from a number of people who appreciated their value, led in 1838 to the appointment of a Commission to advise on the future of Kew. This Commission not only recommended the continuance of Kew as a State institution, but urged a more vigorous direction of its activities, in particular the study of plants and their uses, and the supplying of useful plants to territories overseas. To make effective these recommendations the first Director, William Hooker, was appointed in 1841.

In the years since then under successive directors, the study of the world's plants has been the main task of Kew. Here in the course of years, has been built up an unrivalled collection of plants, some in living state in the gardens and glasshouses, but many more in dried state in the Herbarium, providing a rich store of material for study of the identification and affinities of plants, their distribution over the world's surface, and the uses to which they can be put. Amongst this collection the flora of Singapore and of the neighbouring territories is well represented, thanks to the efforts of past collectors, and as a result Kew is able to be of assistance in the compiling of the great *Flora Malesiana* now being undertaken.

Kew Collectors

But it is in Kew's other functions, the sending out of men trained in the knowledge and care of plants, and the supplying of plants of economic use, that the strong links between Kew and Singapore have been forged. As early as 1772 men trained at Kew were being

sent abroad, the first, Francis Masson, being appointed by Banks to go to South Africa there to travel and collect seeds and plants for Kew. Masson proved a diligent collector sending back to England many plants hitherto unknown, of which some have since become garden-favourites. He subsequently made expeditions in Europe, the West Indies, and Canada, with such good results that Banks was encouraged to send out others.

Such a one was David Nelson who went as botanist in 1776 on the third voyage which Captain Cook made to the South Seas, and collected plants at many places where the ship called. Returning safely from this voyage, he was then appointed to Captain Bligh's ship H.M.S. *Bounty* sailing for Tahiti. At this place breadfruit plants were to be taken on board and Nelson's job was to see that they were properly stowed and tended during their voyage to the West Indies. The story of that ill-fated voyage and its mutiny is well known. Loyal to his captain, Nelson shared the privations of the open boat during the long journey to Timor, only to die a few days after reaching this haven, commended by Captain Bligh for his "manly fortitude in our late disastrous circumstances."

To retrieve this disaster a second voyage was made by Captain Bligh in 1791. On this occasion two Kew men accompanied the expedition, which was completely successful in conveying a large supply of breadfruit trees to the West Indies where they were established without difficulty. One of these men, Christopher Smith, deserves mention here as being probably the first man trained at Kew to give his service, if not to Singapore, at least to Malaya. In 1794 Smith was appointed botanist of the Honourable East India Company at Calcutta and, three years later, he was sent to the Molucca Islands to collect plants. These islands were then the centre of the spice trade which had been held as a strict monopoly first by the Portuguese and latterly by the Dutch. In 1797, through fortunes of war, Britain had access to the spice islands and Christopher Smith's commission was to obtain planting-material of valuable spice-trees for growing in the East India Company's territory. In this he was extremely successful, obtaining no less than 70,000 nutmeg trees and 55,000 clove trees of which the bulk went to Penang whence someone was able to write "we are now become masters of every kind of spice plant valuable or uncommon." Smith himself went to Penang to supervise their cultivation and died there in 1806. Doubtless from some of his trees were descended the nutmegs and cloves introduced in 1819 into the Gardens of the Agri-Horticultural Society in Singapore, which provided a useful source of revenue to the Society for many years.

About this time, botanic gardens were being opened up in many British colonial possessions. The first were in West Indies, at St. Vincent in 1764 and Jamaica a few years later. Then came gardens of the East India Company, at Calcutta in 1786 and Madras soon after, the spice garden at Penang about 1800, and the garden of Peradeniya, Ceylon in 1821. These places looked to Kew to provide men trained in horticulture, and Kew men soon filled a majority of posts in the colonial gardens and were responsible for starting horticultural work in many new territories. These men commonly remained in touch with Kew and there was often a frequent exchange of plants, Kew sending out plants of economic or ornamental value for the new gardens and receiving in return specimens of the indigenous vegetation.

Kew Men in Singapore

Singapore was added to the botanic gardens served by men of Kew in 1875, when the Director of Kew was asked to supply a practised botanist for the post of Superintendent. He chose Henry James Murton, a young man for the job, but a skilled and keen horticulturist. The Gardens at Singapore up to this time had served chiefly as a pleasure-park, and Murton deserves recognition for altering its character, for improving the collection of plants, seeing to their naming, and making trials of new economic plants. This work was continued from 1880 by another Kew man, Nathaniel Cantley, a great believer in system and orderliness, whose notable contribution to the Gardens was cut short by his early death. Both these men had the assistance of a third trained at Kew, Walter Fox, whose service in Singapore and Penang extended over 31 years. These three did much to set the Botanic Gardens on the right lines and prepare for the progressive development which followed under H. N. Ridley and his successors. In more recent times men trained at Kew have continued to be appointed to Singapore and, amongst them, we would pay tribute to a splendid horticulturist J. C. Nauen, whose service to his fellows and gallant death as a prisoner-of-war are remembered at Kew, as doubtless at Singapore.

It must not be suggested, however, that movement between Kew and Singapore has been all one way, for it was to the vicinity of Kew that Ridley came on retiring from Service in Singapore and, so long as he remained in active health, he visited the Gardens at Kew almost daily. Another former Director from Singapore, R. E. Holttum, is also a neighbour at Kew, and both I. H. Burkill and E. J. H. Corner are sufficiently near to be occasional and welcome visitors. It is a happy occurrence that in this year of celebration the Kew Guild, the association of present and past members of the

Kew Staff should have as its President F. Flippance, a Kew man whose long experience in the East has included service in the Singapore Botanic Gardens. Moreover at Kew we have been glad to welcome as student-gardeners young men from the Gardens at Singapore who, after a period of training at Kew, return east with a widened knowledge of plants and of horticultural skill. These too, it may be hoped, will help to strengthen the bonds between the two Gardens.

New Plants for the East

For these are the strong links between Kew and Singapore, the men such as have been mentioned whose skill and loyal service have been shared by both places. Nor must we forget the plants distributed from Kew which have formed so useful a link with other gardens.

Reference has been made to co-operation between the Honourable East India Company and the Royal Botanic Gardens, and this had as one of its most productive results the introduction of quinine into the Far East. A century ago, while the effectiveness of quinine against malaria was well known, the drug itself was scarce and not generally available, since the only source was the wild growth of *Cinchona* trees in the Andes. An expedition to South America in 1860 was successful in obtaining seed of several species, and the seedlings, raised at Kew, were sent to India, Ceylon, and other places. In India particularly the plants were readily established and plantations were made on a large scale with the result that quinine was soon obtainable throughout the East at low cost. The influence this introduction had on general health and well-being can hardly be estimated.

So encouraging was the outcome of this venture that it was followed by a second, an expedition to Brazil to collect seed of the Para rubber-tree. A supply of seed was sent to Kew in 1876 and gave rise to seedlings which, as soon as they were large enough, were distributed to countries where it was thought they might suitably be grown. A case of these plants sent to Singapore in 1877 came into the hands of H. J. Murton, and 12 plants survived to be planted in the Gardens at Singapore and 9 at Kuala Kangsar in Perak. From these plants, and others which came subsequently from Ceylon, was built up the great rubber industry of Malaya, which brought a new commodity into every civilised home and made possible a new era in road-transport.

It may seem idle to conjecture what the history of Singapore would have been if *Hevea* had not arrived when it did, if the threatened closure of Kew in 1838 had in fact taken place, if the

Gardens at Singapore had not been in running order with a Murton and a Ridley to take charge. Such thoughts are not altogether vain if they bring home to us what great service these botanic gardens have rendered through the exchange and development of useful plants. Nor must this be regarded as their only, or even their chief, function, which, as has been shown, is the study of plants and plant-resources in its widest sense.

Botanic gardens have not been without their critics, who, at different times and places, have pointed out how much money is spent and how little comes back as revenue, urging that they be closed or their activities trimmed in the interest of economy. Looking back 100 years, and 200 years, we can clearly see how time has fully justified the men of vision, men like Banks, the Hookers, and Ridley, whose faith in botanic gardens led them, not to close them down, but to develop and shape them to serve the community to best effect. Having viewed the splendid record of the past, we can look to the future of these Gardens with confidence, believing that the skill and devoted service, which have already achieved so much, may have no less a contribution to make in years to come.